

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Nicolai Papke

Application No.: 10/506,553

Confirmation No.: 1658

Filed: October 6, 2004

Art Unit: 1712

For: POLYOXYMETHYLENE MOULDING
COMPOUND AND MOLDED BODY
PRODUCED THEREFROM

Examiner: A. Toscano

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

As required under § 41.37(a), this brief is filed within two months of the Notice of Appeal filed in this case on February 26, 2008, and is in furtherance of said Notice of Appeal.

The fees required under § 41.20(b)(2) are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1205.2:

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I. REAL PARTY IN INTEREST

The real party in interest for this appeal is:

TICONA GmbH.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Total Number of Claims in Application

There are 19 claims pending in application.

Current Status of Claims

1. Claims canceled: 3-6, 8 and 12-14

2. Claims withdrawn from consideration but not canceled: 0

3. Claims pending: 1, 2, 7, 9-11 and 15-27

4. Claims allowed: 0

5. Claims rejected: 1, 2, 7, 9-11 and 15-27

Claims On Appeal

The claims on appeal are claims 1, 2, 7, 9-11 and 15-27.

IV. STATUS OF AMENDMENTS

Applicant filed an Amendment After Final Rejection on February 26, 2008. The Examiner responded to the Amendment After Final Rejection in an Advisory Action mailed March 14, 2008. In the Advisory Action, the Examiner indicated that Applicants' proposed amendments to claims 1, 2, 7, 9-11 and 15-27, would be entered. The Examiner indicated that the 35 USC 112 rejection with respect to claim 7 has been overcome by this amendment.

Accordingly, the claims in Appendix A do incorporate the amendments indicated in the paper filed by Applicant on February 26, 2008.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The applicant is arguing claims 1 and 18-26 separately. Claims 1 and 2 are the only independent claims. Claims 1, 2 and 18-26 and the support for these claims are listed below:

1. A polyacetal molding composition comprising
 - a) from 20 to 99% by weight of a polyacetal homo- or copolymer,
 - b) from 0.1 to 80% by weight of an additive, and
 - c) from 0.00001 to 0.005% by weight of a catalyst which catalyzes a chemical reaction between the polyacetal matrix polymer and the surface of the additive, where the catalyst does not comprise the element boron and is not a Brönsted acid and wherein the catalyst is selected from the group consisting of ethyltriphenylphosphonium bromide, tetraphenylphosphonium bromide, tetrabutylphosphonium bromide, stearyltributylphosphonium bromide, triphenylphosphane, n-butyl titanate, and their mixtures. **[see the original claims 1, 3 (for component c), 8 (for the specific catalysts) and specification at page 2, line 31 through page 3, line 2 and page 4, lines 15-20, page 7, lines 6-10, 17, and 31 and experiments 9-17 found at pages 22-26 of the specification].**

2. A long-fiber-reinforced polyacetal molding composition comprising
 - a) from 20 to 90% by weight of a polyoxymethylene homo- or copolymer,
 - b) from 10 to 80% by weight of a reinforcing fiber,
 - c) from 0.00001 to 0.5% by weight of at least one catalyst which catalyzes a chemical reaction between the polyacetal homo- or copolymer and the surface of the reinforcing fiber andwherein the catalyst does not comprise the element boron and is not a Brönsted acid and wherein

the catalyst is selected from the group consisting of ethyltriphenylphosphonium bromide, tetraphenylphosphonium bromide, tetrabutylphosphonium bromide, stearyltributylphosphonium bromide, triphenylphosphane, n-butyl titanate, and their mixtures. **[see the original claims 2, 3 (for component c), 8 (for the specific catalysts) and specification at page 3, lines 4-9 and page 4, lines 15-20, page 7, lines 6-10, 17, and 31 and experiments 9-17 found at pages 22-26 of the specification].**

18. The polyacetal molding composition as claimed in claim 2, wherein said catalyst is present in an amount from 0.0005 to 0.03% by weight, based on the total weight of the molding composition. **[see the specification at page 4, lines 15-16 and 19-24].**

19. The polyacetal molding composition as claimed in claim 2, wherein said catalyst is present in an amount from 0.0007 to 0.01% by weight, based on the total weight of the molding composition. **[see the specification at page 4, lines 15-16 and 19-24].**

20. The polyacetal molding composition as claimed in claim 2, wherein said catalyst is present in an amount from 0.0007 to 0.005% by weight, based on the total weight of the molding composition. **[see the specification at page 4, lines 15-16 and 19-24].**

21. The polyacetal molding composition as claimed in claim 15, wherein said catalyst is present in an amount from 0.0005 to 0.03% by weight, based on the total weight of the molding composition. **[see the specification at page 4, lines 15-16 and 19-24].**

1 **22.** The polyacetal molding composition as claimed in claim 15, wherein said catalyst is present
2 in an amount from 0.0007 to 0.01% by weight, based on the total weight of the molding
3 composition. **[see the specification at page 4, lines 15-16 and 19-24].**

4
5 **23.** The polyacetal molding composition as claimed in claim 15, wherein said catalyst is present
6 in an amount from 0.0007 to 0.005% by weight, based on the total weight of the molding
7 composition. **[see the specification at page 4, lines 15-16 and 19-24].**

8 **24.** The polyacetal molding composition as claimed in claim 17, wherein said catalyst is present
9 in an amount from 0.0005 to 0.03% by weight, based on the total weight of the molding
10 composition. **[see the specification at page 4, lines 15-16 and 19-24].**

11
12 **25.** The polyacetal molding composition as claimed in claim 17, wherein said catalyst is present
13 in an amount from 0.0007 to 0.01% by weight, based on the total weight of the molding
14 composition. **[see the specification at page 4, lines 15-16 and 19-24].**

15
16 **26.** The polyacetal molding composition as claimed in claim 17, wherein said catalyst is
17 present in an amount from 0.0007 to 0.005% by weight, based on the total weight of the
18 molding composition. **[see the specification at page 4, lines 15-16 and 19-24].**

19 **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

- 20 1. Claims 1 and 27 are rejected as being unpatentable over Miyawaki (JP 06240105)
21 ("Miyawaki") in view of Linder (US 4683267)("Linder").
22

2. Claims 1 and 27 are rejected as being unpatentable over Miyawaki and Linder in view of Yabuta (US 5889115) (“Yabuta”).
3. Claims 1 and 27 are rejected as being unpatentable over Miyawaki and Linder in view of Bederke (US 5426156) (“Bederke”).
4. Claims 1, 2, 7, 11, and 18-20 are rejected as being unpatentable over Natarajan (US 4480071) (“Natarajan”) in view of Linder.
5. Claims 1, 2, 7, 11, 15, 16, and 21-23 are rejected as being unpatentable over Natarajan and Linder in view of Yabuta.
6. Claims 1, 2, 7, 11, 15, 17, and 24-26 are rejected as being unpatentable over Natarajan and Linder in view of Bederke.
7. Claims 9 and 10 are rejected as being unpatentable over Natarajan and Linder in view of Bederke of Yabuta in further view of Sharma (US 6090319) (“Sharma”).
8. Claims 1, 2, 3, 7, 9, 10, 11, 15, 16 and 17 were rejected under the judicially created Doctrine of Obviousness-type double patenting over Claims 1, 4, 9, 10-12, 16-24 of co-pending Application Serial No. 10/506,541 now issued Patent No. 7,169,887 (“the ‘887 patent”) in view of Laughner.

1 **VII. ARGUMENT**

2 **Claims 1, 2, 7, 11, 15, 16, 17 and 27**

3 1. Claims 1 and 27 were rejected under 35 U.S.C. § 103 as being unpatentable over
4 Miyawaki in view of Linder.

5 2. Claims 1 and 27 are rejected as being unpatentable over Miyawaki and Linder in view
6 of Yabuta.

7 3. Claims 1 and 27 are rejected as being unpatentable over Miyawaki and Linder in view
8 of Bederke.

9 **Rejection Over Miyawaki Under 35 U.S.C. § 103**

10 The applicant claims a polyacetal molding composition comprising

- 11 a) from 20 to 99% by weight of a polyacetal homo- or copolymer,
12 b) from 0.1 to 80% by weight of an additive, and
13 c) **from 0.00001 to 0.005% by weight of a specific catalyst** which does not comprise
14 the element boron and is not a Brönsted acid and wherein the catalyst is selected
15 from the group consisting of ethyltriphenylphosphonium bromide,
16 tetraphenylphosphonium bromide, tetrabutylphosphonium bromide,
17 stearyltributylphosphonium bromide, triphenylphosphane, n-butyl titanate, and their
18 mixtures (see claim 1).

19 The Examiner stated at the bottom of page 2 of the Final Office Action, "Miyawaki does not
20 disclose the use of the catalysts in Claim 1." This is not the only difference between the
21 applicant's claimed invention and Miyawaki. The applicant's claimed invention (see
22 independent claim 1), requires that the catalyst is present in an amount from 0.0007 to 0.005%
23 by weight, based on the total weight of the molding composition. Miyawaki teaches away from
24 this feature. Miyawaki states at the end of paragraph no. 0006:

25 The loading of a component are (A) **0.01-5 weight** section is suitable to
26 the component 100 weight section. When **there are too few amounts of**
27 **catalysts, a reaction cannot fully progress and effectiveness of this**
28 **invention cannot be acquired.** (emphasis added)
29

1 Clearly the primary reference, Miyawaki, teaches that you need a minimum 0.01 weight percent
2 of the catalyst which is double the maximum claimed by the applicant's claim 1. A person of
3 ordinary skill in the art would not look to Linder, Yabuta or Bederke to use a low amount of
4 catalyst to modify Mikawaki, especially, in view of the fact that Mikawaki teaches using a very
5 high amount of catalyst.

6 The Examiner asserts at page 3 of the Final Office Action,

7 It would have been obvious to one of ordinary skill in the art at the time
8 of the invention to decrease the amount of catalyst in Miyawaki, as taught
9 by Linder in order to void coloring the product.

10 However, Mikawaki stated, "when there are too few amounts of catalysts, a reaction cannot fully
11 progress and effectiveness of this invention cannot be acquired". Therefore, if the amount of
12 catalyst of Linder was combined with Miyawaki, the reaction would not fully progress according
13 to Mikawaki. Mikawaki clearly teaches away from the applicant's claimed invention. For this
14 reason alone these rejections should be withdrawn.

15 **Rejections over Natarajan in view of the Linder, Yabuta or Bederke**

16 4. Claims 1, 2, 7, 11, and 18-20 are rejected as being unpatentable over Natarajan in view
17 of Linder.

18 5. Claims 1, 2, 7, 11, 15, 16, and 21-23 are rejected as being unpatentable over Natarajan
19 and Linder in view of Yabuta.

20 6. Claims 1, 2, 7, 11, 15, 17, and 24-26 are rejected as being unpatentable over Natarajan
21 and Linder in view of Bederke.

22 7. Claims 9 and 10 are rejected as being unpatentable over Natarajan and Linder in view
23 of Bederke of Yabuta in further view of Sharma.

24 The primary reference in all these rejection is Natarajan. As the Examiner stated
25 Natarajan does not teach the applicant's claimed catalyst (see the top of page 5 of the Final
26 Office Action). In fact, Natarajan discloses at col. 7, lines 46 to col. 8, line 29,

1
2 The isocyanate catalyst which is employed may comprise any of the
3 known catalysts which serve to facilitate (1) the unblocking of the blocked
4 isocyanate (if employed) and/or (2) the coupling reaction between the
5 oxymethylene polymer and the filler at the melt processing conditions
6 employed. Specifically, the catalyst will catalyze the unblocking of the
7 blocked isocyanate (if employed) to permit it to react and bridge the
8 terminal reactive hydroxyl groups in the polymer and the reactive groups
9 in the filler. Such catalysts include but are not limited to the

- 10 1) organic salts of alkali metals,
- 11 2) lead,
- 12 3) iron,
- 13 4) tin,
- 14 5) cobalt,
- 15 6) vanadium,
- 16 7) titanium;
- 17 8) trialkylenediamines;
- 18 9) N-alkylethyleneimines; and the like, the following being typical:
- 19 10) sodium o-phenylphenate;
- 20 11) sodium trichlorophenate;
- 21 12) sodium tetramethoxyborate;
- 22 13) sodium tetrachlorophenate;
- 23 14) sodium methylcarbonate;
- 24 15) sodium pentachlorophenate;
- 25 16) lead linoresinate;
- 26 17) lead naphthenate;
- 27 18) lead oleate;
- 28 19) lead 2-ethylhexonate;
- 29 20) lead resinate;
- 30 21) ferric 2-ethylhexoate;
- 31 22) ferric chloride;
- 32 23) ferric acetylacetonate;

- 1 24) dibutyltin sulfide;
- 2 25) dibutyltin acetylacetonate;
- 3 26) dibutyltin dibutoxide;
- 4 27) dibutyltin maleate;
- 5 28) dibutyltin di-o-phenylphenate;
- 6 29) dibutyltin dilaurate;
- 7 30) dibutyltin diacetate;
- 8 31) dibutyltin di-2-ethylhexoate;
- 9 32) stannous oleate;
- 10 33) stannous 2-ethylhexoate;
- 11 34) stannous chloride;
- 12 35) butyltin trichloride;
- 13 36) tributyltin oxide;
- 14 37) tributyltin o-phenylphenate;
- 15 38) tributyltin cyanate;
- 16 39) cobalt 2-ethylhexoate;
- 17 40) cobalt naphthenate;
- 18 41) cobalt linoresinate;
- 19 42) cobalt benzoate;
- 20 43) cobalt acetylacetonate;
- 21 44) vanadium acetylacetonate;
- 22 45) vanadyl acetylacetonate;
- 23 46) tetraisopropyl titanate;
- 24 47) dibutyltitanium dichloride;
- 25 48) methoxytitanium trichloride;
- 26 49) butoxytitanium trichloride;
- 27 **50) tetrabutyl titanate;**
- 28 51) tetra-2-ethylhexyl titanate;
- 29 52) titanium acetylacetonate;
- 30 53) triethylenediamine; n-ethylenimine;
- 31 54) tetramethylguanidine;
- 32 55) 1-methyl-4-(dimethylaminoethyl) piperazine;

- 56) N,N,N',N'-tetramethyl-1,3-butylenediamine;
- 57) N-ethylmorpholine; triethylamine;
- 58) copper acetylacetonate;
- 59) copper naphthenate;
- 60) manganous acetylacetonate;
- 61) manganous linoresinate;
- 62) manganous 2-ethylhexoate;
- 63) cadmium nitrate;
- 64) cadmium laurate;
- 65) cadmium alkyl aryl phosphite complex;
- 66) zinc acetylacetonate;
- 67) zinc naphthenate;
- 68) thorium acetylacetonate;
- 69) thorium nitrate;
- 70) nickel acetylacetonate;
- 71) nickelocene;
- 72) chromium acetylacetonate;
- 73) uranyl nitrate;
- 74) dimethylsilicon-di-2-ethylhexoate;
- 75) magnesium acetylacetone;
- 76) aluminum acetylacetonate;
- 77) zirconium acetylacetonate;
- 78) beryllium acetylacetonate;
- 79) tributylphosphine;
- 80) diphenylmercury;
- 81) n-alkyl dimethyl benzyl ammonium saccharinates wherein said alkyl is C₁₂-C₁₈ and mixtures thereof and the like. Further reference may be made to Industrial and Engineering Chemistry, Product Research and Development, Vol. 1, No. 4, December 1962, pages 261-264 for a further discussion of isocyanate-

1 active catalysts¹. (emphasis added)

2
3 Natarajan discloses 81 different catalysts. It is acknowledged that Natarajan
4 discloses tetrabutyl titanate. However, none of the examples use n-butyl titanate. The
5 Examiner has asserted that one catalyst in the group is equivalent to other catalysts taught
6 by the secondary references. The applicant respectfully disagrees with this combination.
7 The applicant does not believe that the prior art references are combinable. For at least
8 the above reasons these rejections should be withdrawn.
9

10 **DOUBLE-PATENTING REJECTION**

11 8. Claims 1, 2, 3, 7, 9, 10, 11, 15, 16 and 17 were rejected under the judicially created Doctrine
12 of Obviousness-type double patenting over Claims of the '887 patent in view of Laughner.
13

14 Obviousness-type double patenting as defined is when claims in a patent application are
15 not patentably distinguishable from claims in a patent (MPEP 804). The test applied to
16 determine obviousness-type double patenting exists is whether or not the claims in the
17 application define merely an obvious variation of the invention disclosed and claimed in the
18 patent (In re Vogel and Vogel, 164 USPQ 619 (CCPA 1970). If claims are unobvious over 35
19 U.S.C. §103, there can be no double patenting (In re White and Langer, 160 USPQ 417 (CCPA
20 1969)). The Examiner refers that these claims overlap or at least encompass each other.
21 Further, the overlapping of claims is not a significant or controlling factor in obviousness-type
22 double patenting (In re Longi et al., 225 USPQ 645 (CAFC 1985)). The proper consideration of
23 obviousness type doubling patenting is the improper extension of the patent right. The
24 applicants believe that these applications are patentably distinct for the reasons stated below.

¹ The numbers were inserted by the undersigned.

Claims 1 and 5 of the '887 patent state,

A **thermoplastic molding** composition comprising

a) **from 20 to 99% by weight of a thermoplastic polymer**

selected from the group consisting of polyolefin, modified polyolefin; polyacrylate, polymethacrylate, polymers produced via polymerization of esters and/or amides of acrylic or methacrylic acid, and also their copolymers, polyamide, polyester, polycarbonate, polyether, polybioether, polyphenylene oxide, polyarylene sulfides, and their mixtures

b) from 10 to 80% by weight of a reinforcing fiber and

c) from 0.00001 to 1.0% by weight of a phosphane, sulfonium salt or a titanyl compound and/or 0.00001 to 0.03% by weight of a phosphonium salt or ammonium salt or their mixtures as a catalyst which catalyzes the formation of covalent bonds between the thermoplastic polymer and the surface of the additive. (emphasis added)

5. The **thermoplastic molding** composition as claimed in claim 1, wherein the catalyst is selected from the group consisting of ethyltriphenylphosphonium bromide, tetraphenylphosphonium bromide, tetrabutylphosphonium bromide, stearyl-tributylphosphonium bromide, triphenylphosphane, and their mixtures. (emphasis added)

Claim 1 of the instant application is as follows:

A polyacetal molding composition comprising

a) from 20 to 99% by weight of a **polyacetal homo- or copolymer**,

b) from 0.1 to 80% by weight of an additive, and

c) up to 1.0% by weight of a catalyst which catalyzes a chemical reaction between the polyacetal matrix polymer and the surface of the additive,

where the catalyst does not comprise the element boron and is not a Brönsted acid and

wherein the catalyst is selected from the group consisting of ethyltriphenylphosphonium bromide, tetraphenylphosphonium bromide, tetrabutylphosphonium bromide, stearyltributylphosphonium bromide, triphenylphosphane, n-butyl titanate, and their

1 mixtures and wherein said catalyst is present in an amount from 0.0007 to 0.005% by
2 weight, based on the total weight of the molding composition.

3
4 Claim 2 of the instant application is as follows:

5 A **long-fiber-reinforced polyacetal molding composition** as claimed in claim 1
6 comprising

- 7 a) from 20 to 90% by weight of a **polyoxymethylene homo- or copolymer**,
8 b) from 10 to 80% by weight of a reinforcing fiber,
9 c) from 0.00001 to 0.5% by weight of at least one catalyst which catalyzes a chemical
10 reaction between the polyacetal homo- or copolymer and the surface of the
11 reinforcing fiber and

12 wherein the catalyst does not comprise the element boron and is not a Brönsted acid and
13 wherein the catalyst is selected from the group consisting of ethyltriphenylphosphonium
14 bromide, tetraphenylphosphonium bromide, tetrabutylphosphonium bromide,
15 stearyltributylphosphonium bromide, triphenylphosphane, n-butyl titanate, and their
16 mixtures

17
18 In the instant case, one difference between the claimed invention and the claims of the '887
19 patent is that the claimed invention is directed to a **polyacetal molding composition** while the
20 claimed invention of the '887 patent are to a **thermoplastic molding composition**².

21 A second difference is between the two is that component a) in the '887 patent is a) **a**
22 **thermoplastic polymer** while component a) in the applicant's claimed invention is a **polyacetal**
23 **homo- or copolymer**.

24 The Examiner has relied upon Laughner for these features. The applicant does not believe
25 that Laughner is combinable with the '887 patent. For the above reasons, this rejection should
26 be withdrawn.

27
² It is noted that the preamble in claims 16-20 inadvertently state "polyacetal molding composition". However, this was corrected in Certificate of Correction.

1 **Claims 18, 21 and 24**

2 4. Claims 1, 2, 7, 11, and 18-20 are rejected as being unpatentable over Natarajan (US
3 4480071) in view of Linder (US 4683267).

4 5. Claims 1, 2, 7, 11, 15, 16, and 21-23 are rejected as being unpatentable over
5 Natarajan and Linder in view of Yabuta.

6 6. Claims 1, 2, 7, 11, 15, 17, and 24-26 are rejected as being unpatentable over
7 Natarajan and Linder in view of Bederke.

8 The group of claims requires that the maximum amount of catalyst claimed is **0.03 %**.

9 Natarajan discloses at col. col. 8, lines 30-36,

10 The catalyst may be employed in varying amounts ranging from about
11 **0.15 to 2.5** percent by weight, based on the weight of the isocyanate
12 compound. Preferably, the catalyst is employed in an amount ranging from
13 about **0.2 to 2.0** percent by weight, based on the weight of the isocyanate
14 compound. (emphasis added)

15
16 The minimum amount of the catalyst is about 0.15% and preferably about 0.2% by
17 weight. However, the maximum amount of catalyst claimed is **0.03 %**. The applicant's
18 claimed maximum amount of catalyst is double the minimum amount of catalyst taught
19 by Natarajan. Clearly Natarajan teaches away from this low amount of catalyst.

1

2 **Claims 19, 22 and 25**

3 4. Claims 1, 2, 7, 11, and 18-20 are rejected as being unpatentable over Natarajan (US
4 4480071) in view of Linder (US 4683267).

5 5. Claims 1, 2, 7, 11, 15, 16, and 21-23 are rejected as being unpatentable over
6 Natarajan and Linder in view of Yabuta.

7 6. Claims 1, 2, 7, 11, 15, 17, and 24-26 are rejected as being unpatentable over
8 Natarajan and Linder in view of Bederke.

9 The group of claims requires that the maximum amount of catalyst claimed is **0.01 %**.

10 As stated above, Natarajan discloses at col. col. 8, lines 30-36,

11 The catalyst may be employed in varying amounts ranging from about
12 **0.15 to 2.5** percent by weight, based on the weight of the isocyanate
13 compound. Preferably, the catalyst is employed in an amount ranging from
14 about **0.2 to 2.0** percent by weight, based on the weight of the isocyanate
15 compound. (emphasis added)

16

17 The minimum amount of the catalyst is about 0.15% and preferably about 0.2% by
18 weight. However, the maximum amount of catalyst claimed is 0.01%. The applicant's
19 claimed amount is over a factor of ten less than the minimum amount of catalyst required
20 by Natarajan. Clearly Natarajan teaches away from this low amount of catalyst.

Claims 20, 23 and 26

4. Claims 1, 2, 7, 11, and 18-20 are rejected as being unpatentable over Natarajan (US 4480071) in view of Linder (US 4683267).
5. Claims 1, 2, 7, 11, 15, 16, and 21-23 are rejected as being unpatentable over Natarajan and Linder in view of Yabuta.
6. Claims 1, 2, 7, 11, 15, 17, and 24-26 are rejected as being unpatentable over Natarajan and Linder in view of Bederke.

The group of claims requires that the maximum amount of catalyst claimed is **0.005 %**.

As stated above, Natarajan discloses at col. 8, lines 30-36,

The catalyst may be employed in varying amounts ranging from about **0.15 to 2.5** percent by weight, based on the weight of the isocyanate compound. Preferably, the catalyst is employed in an amount ranging from about **0.2 to 2.0** percent by weight, based on the weight of the isocyanate compound. (emphasis added)

The minimum amount of the catalyst is about 0.15% and preferably about 0.2% by weight. However, the maximum amount of catalyst claimed by the applicant for this group of claims is **0.005 %**. This is over a factor of twenty less than the minimum amount of catalyst taught by Natarajan. Clearly Natarajan teaches away from this low amount of catalyst.

VIII. CLAIMS

A copy of the claims involved in the present appeal is attached hereto as Appendix A. As indicated above, the claims in Appendix A include the amendments filed by Applicant on February 26, 2008.

1 **IX. EVIDENCE**

2 Evidence pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 and/or entered by or relied
3 upon by the Examiner is attached hereto as APPENDIX B.

4 **X. RELATED PROCEEDINGS**

5 As stated in section II, *supra*, no related proceedings have been or are now pending.
6 Accordingly, no related decisions are provided in APPENDIX C.

7 **XI. CONCLUSION**

8 For these reasons, reversal of the obviousness rejection under 35 U.S.C. § 103(a) of
9 claims 1, 2, 7, 9-11, and 15-27 is strongly urged.

10

1 The Director is authorized to charge \$510.00 to Deposit Account No. 03-2775, under
2 Order No. 05587-00368-US, to cover the fee under 37 C.F.R. § 41.20(2) for this Appeal Brief.
3 Appellants believe no additional fee is due. However, if any additional fee is due, the Director is
4 hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should
5 have been filed herewith (or with any paper hereafter filed in this application by this firm) to our
6 Deposit Account No. 03-2775, under Order No. 05887-00368-US, from which the undersigned is
7 authorized to draw.

Dated: April 28, 2008

Respectfully submitted,

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Attorney for Applicant

APPENDIX A

Claims Involved in the Appeal of Application Serial No. 10/506,553

AMENDMENTS TO THE CLAIMS

1. (Previously presented) A polyacetal molding composition comprising
 - a) from 20 to 99% by weight of a polyacetal homo- or copolymer,
 - b) from 0.1 to 80% by weight of an additive, and
 - c) from 0.00001 to 0.005% by weight of a catalyst which catalyzes a chemical reaction between the polyacetal matrix polymer and the surface of the additive, where the catalyst does not comprise the element boron and is not a Brönsted acid and wherein the catalyst is selected from the group consisting of ethyltriphenylphosphonium bromide, tetraphenylphosphonium bromide, tetrabutylphosphonium bromide, stearyltributylphosphonium bromide, triphenylphosphane, n-butyl titanate, and their mixtures.
2. (Previously presented) A long-fiber-reinforced polyacetal molding composition comprising
 - a) from 20 to 90% by weight of a polyoxymethylene homo- or copolymer,
 - b) from 10 to 80% by weight of a reinforcing fiber,
 - c) from 0.00001 to 0.5% by weight of at least one catalyst which catalyzes a chemical reaction between the polyacetal homo- or copolymer and the surface of the reinforcing fiber andwherein the catalyst does not comprise the element boron and is not a Brönsted acid and wherein the catalyst is selected from the group consisting of ethyltriphenylphosphonium bromide, tetraphenylphosphonium bromide, tetrabutylphosphonium bromide, stearyltributylphosphonium bromide, triphenylphosphane, n-butyl titanate, and their mixtures.
3. Cancelled

1 4. Cancelled

3 5. Cancelled

4 6. Cancelled

5 7. (Previously presented) The polyacetal molding composition as claimed in claim 1, wherein
6 said additive is an impact modifier and wherein the impact modifier is selected from the
7 group consisting of polyurethanes, two-phase mixtures of polybutadiene and styrene-
8 acrylonitrile (ABS), modified polysiloxanes, silicone rubbers, graft copolymers of an
9 elastomeric, single-phase core based on polydiene and a hard graft shell (core-shell
10 structure), and mixtures of these components.

12 8. Cancelled.

14 9. (Original) The polyacetal molding composition as claimed in claim 2, wherein the long-
15 fiber-reinforced polyacetal molding composition is a glass-fiber bundle which has been
16 sheathed with one or more layers of the polyacetalhomo- or copolymer, so that the fibers
17 have been impregnated with the polyacetalhomo- or copolymer.

19 10. (Original) The polyacetal molding composition as claimed in claim 9, wherein the glass-
20 fiber bundle has been wetted by the polyacetal homo- or copolymer or by a blend of
21 polyacetal homo- or copolymers and the impregnated glass-fiber bundle has been sheathed
22 by another component, and the impregnated glass-fiber bundle and the other component
23 have been bonded to one another at the surface.

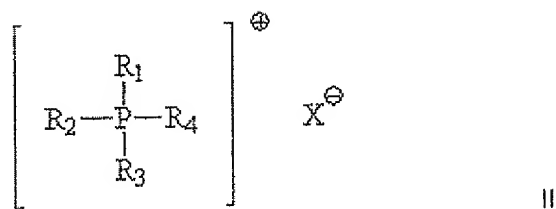
11. (Previously presented) A molded article obtainable via shaping of a polyacetal molding composition as claimed in claim 2.

12. Cancelled.

13. Cancelled

14. Cancelled

15. (Previously presented) The polyacetal molding composition as claimed in claim 2, wherein the catalyst is phosphonium salts which are compounds of the formula II

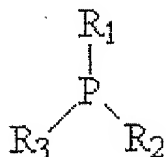


where R_1 , R_2 , R_3 , and R_4 are identical or different, and are monovalent organic radicals,

X is be a halogen atom, and/or an -OR or -R group, where R is alkyl or aryl.

16. (Previously presented) The polyacetal molding composition as claimed in claim 15, wherein R_1 to R_4 are identical or different and have from 2 to 10 carbon atoms and at least one of the radicals R_1 to R_4 , is an aryl radical.

17. (Previously presented) The polyacetal molding composition as claimed in claim 2, wherein the catalyst is phosphanes of the formula IIa



IIa

where the radicals R_1 to R_3 are identical or different, and are monovalent organic radicals.

18. (Previously presented) The polyacetal molding composition as claimed in claim 2,

wherein said catalyst is present in an amount from 0.0005 to 0.03% by weight, based on the total weight of the molding composition.

19. (Previously presented) The polyacetal molding composition as claimed in claim 2,

wherein said catalyst is present in an amount from 0.0007 to 0.01% by weight, based on the total weight of the molding composition.

20. (Previously presented) The polyacetal molding composition as claimed in claim 2,

wherein said catalyst is present in an amount from 0.0007 to 0.005% by weight, based on the total weight of the molding composition.

21. (Previously presented) The polyacetal molding composition as claimed in claim 15,

wherein said catalyst is present in an amount from 0.0005 to 0.03% by weight, based on the total weight of the molding composition.

1 22. (Previously presented) The polyacetal molding composition as claimed in claim 15,
2 wherein said catalyst is present in an amount from 0.0007 to 0.01% by weight, based on
3 the total weight of the molding composition.

4
5 23. (Previously presented) The polyacetal molding composition as claimed in claim 15,
6 wherein said catalyst is present in an amount from 0.0007 to 0.005% by weight, based on
7 the total weight of the molding composition.

8 24. (Previously presented) The polyacetal molding composition as claimed in claim 17,
9 wherein said catalyst is present in an amount from 0.0005 to 0.03% by weight, based on
10 the total weight of the molding composition.

11
12 25. (Previously presented) The polyacetal molding composition as claimed in claim 17,
13 wherein said catalyst is present in an amount from 0.0007 to 0.01% by weight, based on
14 the total weight of the molding composition.

15
16 26. (Previously presented) The polyacetal molding composition as claimed in claim 17,
17 wherein said catalyst is present in an amount from 0.0007 to 0.005% by weight, based on
18 the total weight of the molding composition.

19
20 27. (Previously presented) The polyacetal molding composition as claimed in claim 1,
21 wherein said catalyst is present in an amount from 0.0007 to 0.005% by weight, based on
22 the total weight of the molding composition.

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APPENDIX B

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

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APPENDIX C

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No related proceedings are referenced in II. above, hence copies of decisions in related
proceedings are not provided.

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